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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/660,651	FUKUDA, MASATO
Office Action Summary	Examiner	Art Unit	
	CHAD DICKERSON	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 October 2008</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,8 and 10</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1, 8 and 10</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>12 September 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☒ All b)☐ Some * c)☐ None of:

         1.☒ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail. Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments, see page7, filed 10/28/2008, with respect to the 112 2nd paragraph rejections have been fully considered and are persuasive. The 112 2nd paragraph rejections of claims 1, 8 and 10 have been withdrawn.

2.   Applicant's arguments with respect to claims 1, 8 and 10 have been considered but are moot in view of the new ground(s) of rejection. The Amendment to the claims has necessitated the new ground(s) of rejection. However, the same references of Holmstead and Morita are still being applied. When viewing the Applicant's arguments, the Applicant alleged that the systems of Holmstead and Morita fail to disclose a cache memory, a list storing unit, deletion unit and an overwriting unit[1]. Also, the Applicant alleged that the feature of acquiring image data in a certain list, storing this information in a cache memory, transmitting image data to a printer and features associated with the deletion and overwriting units in the claim language were not performed[2]. The Examiner respectfully disagrees with these assertions.

         Before going into the specifics of disclosing why the Examiner feels that the claimed features are met, an understanding of the Examiner's interpretation of the term "*list*" is needed. When thinking of a list, a broad definition of the term can be described as an ordered collection or array of entities or items. The ordering of the items or entities can be in alphabetical, chronological or even random order. In terms of

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[1] See Applicant's arguments page 9.
[2] Id. pages 8-10.

computational examples, items can be ordered in terms of data size or access date.

However, in reference to Holmstead, the information or item, such as a print job, can be

ordered in terms of print job element. The print job elements are considered as an

ordered collection of items apart of a whole job. Based on the above broad definition

and previous following statements, it is understood that computational devices that store

information in such order contain a "list" of data or information. Since Holmstead stores

both data designated to be printed in the input buffer (304)[3] and data already printed by

the print system in the local memory (302)[4], the Examiner believes that the features of a

first list creation unit, a cache memory and a second list storing unit is performed. Once

image data is designated to be printed, a collection of print job elements are created in

the input buffer and these elements identify information for image data designated to be

printed. Also, the local memory stores another collection of information that is

comprised of elements in a job that have already been printed and the collection of

information is comprised of information that identifies printed image data that is stored in

the local memory. Since the local memory can be comprised of EEPROM, RAM, ROM

and a disk drive, multiple storage units can be used for caching and storing the

information that is used to identify the cached data[5]. Therefore, with the above

explanation, the Examiner still believes that the features regarding the first list creation

unit, the cache memory and the second list storing unit is performed.

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[3] See Holmstead '905 paragraph [0032]-[0038].
[4] Id. paragraphs [0039]-[0044].
[5] Id. paragraphs [0033]-[0036].

Regarding the feature of the acquisition unit, the Holmstead reference is believed to also perform this feature. The Holmstead reference acquires image data identified by job element information from a server device through a network card that facilitates network communication. Since the internal components in the printer can be in a host computer coupled to a printer, the functionality of the system using a host computer with the input buffer and local memory is an alternative implementation of the method of printing image data[6]. The input buffer inside the host computer, considered as the first list, is used to include this job element information while the local memory does not contain the job element information, which is considered as the second list. Once the image data is acquired from the remote sites, or server, the image data is combined into a complete job in the input buffer and printed. The job elements that were added to job that were the missing elements are then stored in the local memory, considered as the cache memory[7]. Therefore, the Examiner believes that the function of the acquisition unit is performed.

Regarding the function of the transmission unit, the Examiner believes that this feature is also performed by the Holmstead reference. Since the printer device can be connected to a host computer, the transmission of data to the printer is understood. When the user designates a print job to be printed, image data is transferred to the input buffer from the local memory since the CPU in the searches the local memory to see if all the print job elements are present in the local memory. Once the CPU determines

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[6] Id. paragraphs [0029]-[0031].
[7] Id. paragraphs [0031]-[0044].

that all the print job elements are not present in the local memory, the server sends the

remaining elements to the computer and the user can send the complete job to the

printer connected to the host computer (see [7]). Based on the above reasoning, the

Examiner believes the feature related to the transmission unit is performed.

   Regarding the feature of the deletion unit, the Examiner feels that the respective

feature is performed. As disclosed in Holmstead, the image data represented through

print job elements can be erased after a certain period of time[8]. When the system has

seen that the job is a certain age, it may delete the job. This job can be a job that is not

designated to be printed at the time the job reaches a certain age (i.e. 30 days old).

The system has stored the image data in the local memory since the job has been

printed in the past. With the job being transmitted from the host computer's local

memory, considered as the cache memory, to the printer earlier than the thirty day job

threshold and not being designated at the time of the thirty day time period, the feature

of deleting information from the local memory is performed.

   Lastly, regarding the feature of the overwriting unit, the Examiner feels that both

the references of Holmstead and Morita still perform this feature. Holmstead discloses

the feature of being able to overwrite information. This overwriting feature can be

performed after the host computer has transmitted information from the local memory to

the coupled printer (see [8]). The Holmstead reference fails to specifically disclose

overwriting the second list with the first list. However, the Morita reference, like the

Holmstead reference, contains a system that involves a host computer to transfer

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[8] Id. paragraph [0051].

printing information to a printing device (same field of endeavor). The Morita reference

contains a hard disk with a RAM, considered as two memory devices that contain a

collection of information pertaining to image data. The Morita reference updates, or

writes, the information of the RAM (17) on the hard disk device (8) to ensure that both

device memories conform to each other[9]. Therefore, with the combination of the two

references regarding the last feature of the overwriting function, the respective claim

limitation is believed to be performed.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

4.   Claims 1, 8 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention.

Re claims 1: The Examiner reviewed the specification in order to better understand the

claim Amendments presented in the response on 10/28/2008. When reviewing the

specification in order to find support for the Amendments, the Examiner noticed that the

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[9] See Morita '467 col. 8, line 35 – col. 10, line 27.

"*overwriting unit*" or function is not specifically mentioned in the specification. When overwriting information on a memory device, this involves writing information over previously written image data present on a memory device. For example, when looking at page 15, lines 20-27 of applicant's specification, this discloses copying content of a first cache list information to a second cache list information. That is the second cache list is updated with the first cache list. This aspect of the specification does not disclose writing information over any previous information whatsoever. The Examiner would like to use spaces as a representation of image data on the list to more accurately convey the underlying point of the rejection. If there are several spaces available in the second cache list but only 3 are used while the first cache list uses 5 spaces of memory for its list, a mere update can be to copy an additional 2 spaces of image data memory not previously present in the second list in order to conform with the 5 spaces presently used in the first list. With this addition, both memories can reflect the same list of data. Since the feature, or even the wording, of overwriting is not specifically disclosed in the specification to clearly convey to one of ordinary skill in the art in the relevant art that the inventor, at the time the invention was filed, had possession of the claimed invention.

Re claim 8: The Examiner reviewed the specification in order to better understand the claim Amendments presented in the response on 10/28/2008. When reviewing the specification in order to find support for the Amendments, the Examiner noticed that the "*overwriting unit*" or function is not specifically mentioned in the specification. When

overwriting information on a memory device, this involves writing information over

previously written image data present on a memory device. For example, when looking

at page 15, lines 20-27 of applicant's specification, this discloses copying content of a

first cache list information to a second cache list information. That is the second cache

list is updated with the first cache list. This aspect of the specification does not disclose

writing information over any previous information whatsoever. The Examiner would like

to use spaces as a representation of image data on the list to more accurately convey

the underlying point of the rejection. If there are several spaces available in the second

cache list but only 3 are used while the first cache list uses 5 spaces of memory for its

list, a mere update can be to copy an additional 2 spaces of image data memory not

previously present in the second list in order to conform with the 5 spaces presently

used in the first list. With this addition, both memories can reflect the same list of data.

Since the feature, or even the wording, of overwriting is not specifically disclosed in the

specification to clearly convey to one of ordinary skill in the art in the relevant art that

the inventor, at the time the invention was filed, had possession of the claimed

invention.

Re claim 10: The Examiner reviewed the specification in order to better understand the

claim Amendments presented in the response on 10/28/2008. When reviewing the

specification in order to find support for the Amendments, the Examiner noticed that the

"*overwriting unit*" or function is not specifically mentioned in the specification. When

overwriting information on a memory device, this involves writing information over

previously written image data present on a memory device. For example, when looking

at page 15, lines 20-27 of applicant's specification, this discloses copying content of a

first cache list information to a second cache list information. That is the second cache

list is updated with the first cache list. This aspect of the specification does not disclose

writing information over any previous information whatsoever. The Examiner would like

to use spaces as a representation of image data on the list to more accurately convey

the underlying point of the rejection. If there are several spaces available in the second

cache list but only 3 are used while the first cache list uses 5 spaces of memory for its

list, a mere update can be to copy an additional 2 spaces of image data memory not

previously present in the second list in order to conform with the 5 spaces presently

used in the first list. With this addition, both memories can reflect the same list of data.

Since the feature, or even the wording, of overwriting is not specifically disclosed in the

specification to clearly convey to one of ordinary skill in the art in the relevant art that

the inventor, at the time the invention was filed, had possession of the claimed

invention.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is directed to

non-statutory subject matter. The claim appears to be trying to gain patent protection

on a seemingly patentable method. However, the preamble presents software used to

control a printer to perform the process of claim 10. This process is non-statutory

subject matter since this information involves software that is not encoded on a

computer-readable medium that is performed by the printer. It is suggested that the

claim be changed to recognize that the software is encoded on a computer-readable

medium and this software performs the method steps of the respective claim.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Holmstead '905 (US Pub 2004/0021905) in view of Morita '467 (USP 5930467).

Re claim 1: Holmstead '905 discloses an information processing apparatus that

acquires a plurality of image data from a server device via a network (i.e. the host

computer connected to the printer or the printer is able to receive information from a

remote site, which is considered as a server device on the network; see fig. 2;

paragraphs [0029]-[0044]) and controls a printer to print a print job generated from the

plurality of image data (i.e. a graphical user interface (114) sends commands to the

printer device to operate the control system (306) in a normal or schedule mode. This

controls the printer since the control system is commanded to download print job

elements specific to the mode use in order to print a print job that is generated from the print job elements, which is analogous to a plurality of image data; see paragraphs [0033] and [0060]-[0071]), comprising:

a first list creation unit that creates a first list of identification information for a plurality of image data designated to be printed (i.e. in the system, the control system is used to create one or a series of print job elements that are used to identify information for print job data that is to be acquired from a remote site, considered as a server device. This information has reference data to the remote site that the information is located and what part the element data is related to in the print job. This is considered as the list of identification information for the image data since this information includes one or a plurality of information used to identify the print job, or image data, to be printed and these elements are a series of elements of a print job file to be fulfilled before a printing operation. The first list is in regards to the print job ticket (500) generated and stored in the input buffer (304). The job ticket stored in the input buffer represents identification information of a plurality of image data that are designated to be printed and can be acquired from a server device if needed; see figs. 3-5; paragraphs [0032]-[0044]);

a cache memory that stores printed image data, which has been printed during previous rounds of printing (i.e. in Holmstead '905 the system can be configured to have a components of the system in a printer (100), or as a part of a host computer (206) in association with a printer (100). The host computer (206) is considered as the information processing apparatus, which has an image data memory (302). The local

memory (302) has print job elements that can be transmitted to the printer (100), or

acquired from the remote site, in association with the host computer (206). The

elements downloaded from the remote site is stored in the local memory, which is

located in the printer, and the local memory has print job information that has been

designated for printing and acquired from the server device. The information stored is

also from previous jobs that have been printed on the printer and the step (414) is used

to store a print ready document on the printer with the previously printed job; see figs. 2

and 3; paragraphs [0032]-[0044]);

a second list storing unit that stores a second list of identification information for

the printed image data stored in said cache memory (i.e. on the remote site (202), the

print job components, considered as identification information for the image data, is

stored. This same information that is stored is also in the print instruction that is

acquired by the control system (306). The local memory is used to store some of the

print job components that have already been printed and these print job components

are analogous to identification information for a plurality of image data. The local

memory (302) is used to compare its components against the print job ticket temporarily

stored in the input buffer, which is where the first listing of the print job components is

located. Also, the local memory stores another collection of information that is

comprised of elements in a job that have already been printed and the collection of

information is comprised of information that identifies printed image data that is stored in

the local memory. Since the local memory can be comprised of EEPROM, RAM, ROM

and a disk drive, multiple storage units can be used for caching and storing the

information that is used to identify the cached data; see figs. 2, 3 and 5; paragraphs [0032]-[0044]);

a comparison unit that compares the first list and the second list (i.e. when the data is first received by the printer, or the host computer that is associated with the printer, the data is temporarily stored in the input buffer (304). The input buffer (304) holds the print job ticket (500) and compares the print job ticket (500) components with the components stored in the local memory (302). This comparison is between the data stored in the input buffer (304) and the data stored in the local memory (302) to see if the data matches up to the print job ticket's (500) listed components; see figs. 2-5; paragraphs [0032]-[0044]);

an acquisition unit that acquires, from the server device, image data identified by identification information which is not included in the second list but in the first list and stores the acquired image data in the cache memory (i.e. the Holmstead reference acquires image data identified by job element information from a server device through a network card that facilitates network communication. Since the internal components in the printer can be in a host computer coupled to a printer, the functionality of the system using a host computer with the input buffer and local memory is an alternative implementation of the method of printing image data. The input buffer inside the host computer, considered as the first list, is used to include this job element information while the local memory does not contain the job element information, which is considered as the second list. Once the image data is acquired from the remote sites, or server, the image data is combined into a complete job in the input buffer and printed.

The job elements that were added to job that were the missing elements are then stored

in the local memory, considered as the cache memory; see paragraphs [0029]-[0044]);

a transmission unit that transmits image data identified by the identification

information included in the first list from the cache memory to the printer after the

acquisition unit acquires the image data from the server device (i.e. the Examiner

believes that this feature is also performed by the Holmstead reference. Since the

printer device can be connected to a host computer, the transmission of data to the

printer is understood. When the user designates a print job to be printed, image data is

transferred to the input buffer from the local memory since the CPU in the searches the

local memory to see if all the print job elements are present in the local memory. Once

the CPU determines that all the print job elements are not present in the local memory,

the server sends the remaining elements to the computer and the user can send the

complete job to the printer connected to the host computer; see paragraphs [0029]-

[0031]);

a deletion unit that deletes, from the cache memory, the image data which is not

designated to be printed, after the transmission unit transmits the image data from the

cache memory to the printer (i.e. in the system, the information stored in the different

directories can be overwritten or erased. At this point, since most of the image data in

the input buffer is temporary, the image data can be deleted, or erased, at a time when

the image data is not in the input buffer. The input buffer represents the first list that

holds the identification information of print job components to be printed, and the image

data located in the second list is represented by the local memory (302), which signifies

a list that holds identification information that contains identification information for image data that has been previously printed. The only time an input buffer contains information is when a print job has been submitted to the printer. If the deletion of information occurs during a period where no print job information is in the input buffer or different print job information is in the input buffer than what is being deleted, the above feature is performed. As disclosed in Holmstead, the image data represented through print job elements can be erased after a certain period of time. When the system has seen that the job is a certain age, it may delete the job. This job can be a job that is not designated to be printed at the time the job reaches a certain age (i.e. 30 days old). The system has stored the image data in the local memory since the job has been printed in the past. With the job being transmitted from the host computer's local memory, considered as the cache memory, to the printer earlier than the thirty day job threshold and not being designated at the time of the thirty day time period, the feature of deleting information from the local memory is performed; see paragraph [0035]-[0038] and [0051]);

an overwriting unit that overwrites the second list after the transmission unit transmits the image data from the cache memory to the printer (i.e. in the system, the list of print job elements that are related to the print job in the local memory is updated with current print elements, if the system detects that the print job elements in the print job is missing. The missing print job elements are then acquired from the remote site, considered as the server device, in the system. To be more specific, when comparing the print job elements in the input buffer to the elements in the local memory, the image

data that is missing is acquired from a server device. The print job components missing from the local memory, but present in the input buffer is an example of having image data not included in the second list but in the first list. Once the scenario occurs where the print job ticket (500) is present in the input buffer does not have all of its coinciding elements in the local memory, then information is acquired from the server device and later on, the local memory can be updated in step (414). Holmstead discloses the feature of being able to overwrite information. This overwriting feature can be performed after the host computer has transmitted information from the local memory to the coupled printer; see figs. 2-5; paragraphs [0032]-[0044] and [0051]).

However, Holmstead '905 fails to teach an overwriting unit that overwrites the second list with the first list.

However, this is well known in the art as evidenced by Morita '467. Morita '467 discloses an overwriting unit that overwrites the second list with the first list (i.e. However, the Morita reference, like the Holmstead reference, contains a system that involves a host computer to transfer printing information to a printing device (same field of endeavor). In the system, if information on the file allocation table (26) on the RAM (17) is modified by having data written or erased from the table, the update flag related to the updating of the RAM is set to one. Next, the CPU (5) checks to see if the update flag is 1 in order to determine if the hard disk (8) needs to be updated in conformity with the RAM. In this case, if something is written on the RAM, then the same information is added on the hard disk in order for both storage devices to be consistent in reflecting the same data. The Morita reference contains a hard disk with a RAM, considered as

two memory devices that contain a collection of information pertaining to image data.

The Morita reference updates, or writes, the information of the RAM (17) on the hard

disk device (8) to ensure that both device memories conform to each other; see figs. 5-

10; col. 8, line 10 - col. 10, line 65).

      Therefore, in view of Morita '467, it would have been obvious to one of ordinary

skill at the time the invention was made to have the features of an overwriting unit that

overwrites the second list with the first list in order to have content relating to file

information on one storage device conform with the content on another storage device

(as stated in Morita '467 col. 9, lines 20-32).

Re claim 8: Holmstead '905 discloses a computer-readable storage medium storing a

function extension program for causing a computer to acquire a plurality of image data

from a server device via a network (i.e. the host computer connected to the printer or

the printer is able to receive information from a remote site, which is considered as a

server device on the network; see fig. 2; paragraphs [0029]-[0044]) and control a printer

to print a print job generated from the plurality of image data (i.e. a graphical user

interface (114) sends commands to the printer device to operate the control system

(306) in a normal or schedule mode. This controls the printer since the control system

is commanded to download print job elements specific to the mode use in order to print

a print job that is generated from the print job elements, which is analogous to a plurality

of image data; see paragraphs [0033] and [0060]-[0071]), the program causing a

computer to:

create a first list of identification information for a plurality of image data

designated to be printed (i.e. in the system, the control system is used to create one or

a series of print job elements that are used to identify information for print job data that

is to be acquired from a remote site, considered as a server device. This information

has reference data to the remote site that the information is located and what part the

element data is related to in the print job. This is considered as the list of identification

information for the image data since this information includes one or a plurality of

information used to identify the print job, or image data, to be printed and these

elements are a series of elements of a print job file to be fulfilled before a printing

operation. The first list is in regards to the print job ticket (500) generated and stored in

the input buffer (304). The job ticket stored in the input buffer represents identification

information of a plurality of image data that are designated to be printed and can be

acquired from a server device if needed; see figs. 3-5; paragraphs [0032]-[0044]);

store in a cache memory printed image data which has been printed during

previous rounds of printing (i.e. in Holmstead '905 the system can be configured to have

a components of the system in a printer (100), or as a part of a host computer (206) in

association with a printer (100). The host computer (206) is considered as the

information processing apparatus, which has an image data memory (302). The local

memory (302) has print job elements that can be transmitted to the printer (100), or

acquired from the remote site, in association with the host computer (206). The

elements downloaded from the remote site is stored in the local memory, which is

located in the printer, and the local memory has print job information that has been

designated for printing and acquired from the server device. The information stored is

also from previous jobs that have been printed on the printer and the step (414) is used

to store a print ready document on the printer with the previously printed job; see figs. 2

and 3; paragraphs [0032]-[0044]);

     store a second list of identification information for the printed image data stored

in said cache memory (i.e. on the remote site (202), the print job components,

considered as identification information for the image data, is stored. This same

information that is stored is also in the print instruction that is acquired by the control

system (306). The local memory is used to store some of the print job components that

have already been printed and these print job components are analogous to

identification information for a plurality of image data. The local memory (302) is used

to compare its components against the print job ticket temporarily stored in the input

buffer, which is where the first listing of the print job components is located. Also, the

local memory stores another collection of information that is comprised of elements in a

job that have already been printed and the collection of information is comprised of

information that identifies printed image data that is stored in the local memory. Since

the local memory can be comprised of EEPROM, RAM, ROM and a disk drive, multiple

storage units can be used for caching and storing the information that is used to identify

the cached data; see figs. 2, 3 and 5; paragraphs [0032]-[0044]);

     compare the first list and the second list (i.e. when the data is first received by

the printer, or the host computer that is associated with the printer, the data is

temporarily stored in the input buffer (304). The input buffer (304) holds the print job

ticket (500) and compares the print job ticket (500) components, with the components
stored in the local memory (302). This comparison is between the data stored in the
input buffer (304) and the data stored in the local memory (302) to see if the data
matches up to the print job ticket's (500) listed components; see figs. 2-5; paragraphs
[0032]-[0044]); and

acquire, from the server device, image data identified by identification information
which is not included in the second list but in the first list and stores the acquired image
data in the cache memory (i.e. the Holmstead reference acquires image data identified
by job element information from a server device through a network card that facilitates
network communication. Since the internal components in the printer can be in a host
computer coupled to a printer, the functionality of the system using a host computer with
the input buffer and local memory is an alternative implementation of the method of
printing image data. The input buffer inside the host computer, considered as the first
list, is used to include this job element information while the local memory does not
contain the job element information, which is considered as the second list. Once the
image data is acquired from the remote sites, or server, the image data is combined into
a complete job in the input buffer and printed. The job elements that were added to job
that were the missing elements are then stored in the local memory, considered as the
cache memory; see paragraphs [0029]-[0044]);

transmit image data identified by the identification information included in the first
list from the cache memory to the printer after the acquisition unit acquires the image
data from the server device (i.e. the Examiner believes that this feature is also

performed by the Holmstead reference. Since the printer device can be connected to a

host computer, the transmission of data to the printer is understood. When the user

designates a print job to be printed, image data is transferred to the input buffer from the

local memory since the CPU in the searches the local memory to see if all the print job

elements are present in the local memory. Once the CPU determines that all the print

job elements are not present in the local memory, the server sends the remaining

elements to the computer and the user can send the complete job to the printer

connected to the host computer; see paragraphs [0029]-[0031]);

delete, from the cache memory, image data which is not designated to be

printed, after the image data has been transmitted from the cache memory to the printer

(i.e. in the system, the information stored in the different directories can be overwritten

or erased. At this point, since most of the image data in the input buffer is temporary,

the image data can be deleted, or erased, at a time when the image data is not in the

input buffer. The input buffer represents the first list that holds the identification

information of print job components to be printed, and the image data located in the

second list is represented by the local memory (302), which signifies a list that holds

identification information that contains identification information for image data that has

been previously printed. The only time an input buffer contains information is when a

print job has been submitted to the printer. If the deletion of information occurs during a

period where no print job information is in the input buffer or different print job

information is in the input buffer than what is being deleted, the above feature is

performed. As disclosed in Holmstead, the image data represented through print job

elements can be erased after a certain period of time. When the system has seen that

the job is a certain age, it may delete the job. This job can be a job that is not

designated to be printed at the time the job reaches a certain age (i.e. 30 days old).

The system has stored the image data in the local memory since the job has been

printed in the past. With the job being transmitted from the host computer's local

memory, considered as the cache memory, to the printer earlier than the thirty day job

threshold and not being designated at the time of the thirty day time period, the feature

of deleting information from the local memory is performed; see paragraph [0035]-

[0038] and [0051]); and

overwrite the second list after the image data has been transmitted from the

cache memory to the printer (i.e. in the system, the list of print job elements that are

related to the print job in the local memory is updated with current print elements, if the

system detects that the print job elements in the print job is missing. The missing print

job elements are then acquired from the remote site, considered as the server device, in

the system. To be more specific, when comparing the print job elements in the input

buffer to the elements in the local memory, the image data that is missing is acquired

from a server device. The print job components missing from the local memory, but

present in the input buffer is an example of having image data not included in the

second list but in the first list. Once the scenario occurs where the print job ticket (500)

is present in the input buffer does not have all of its coinciding elements in the local

memory, then information is acquired from the server device and later on, the local

memory can be updated in step (414). Holmstead discloses the feature of being able to

overwrite information. This overwriting feature can be performed after the host

computer has transmitted information from the local memory to the coupled printer; see

figs. 2-5; paragraphs [0032]-[0044] and [0051]).

However, Holmstead '905 fails to teach overwrite the second list with the first list.

However, this is well known in the art as evidenced by Morita '467. Morita '467

discloses overwrite the second list with the first list (i.e. However, the Morita reference,

like the Holmstead reference, contains a system that involves a host computer to

transfer printing information to a printing device (same field of endeavor). In the system,

if information on the file allocation table (26) on the RAM (17) is modified by having data

written or erased from the table, the update flag related to the updating of the RAM is

set to one. Next, the CPU (5) checks to see if the update flag is 1 in order to determine

if the hard disk (8) needs to be updated in conformity with the RAM. In this case, if

something is written on the RAM, then the same information is added on the hard disk

in order for both storage devices to be consistent in reflecting the same data. The

Morita reference contains a hard disk with a RAM, considered as two memory devices

that contain a collection of information pertaining to image data. The Morita reference

updates, or writes, the information of the RAM (17) on the hard disk device (8) to ensure

that both device memories conform to each other; see figs. 5-10; col. 8, line 10 - col. 10,

line 65).

Therefore, in view of Morita '467, it would have been obvious to one of ordinary

skill at the time the invention was made to have the feature of overwriting the second list

with the first list in order to have content relating to file information on one storage

device conform with the content on another storage device (as stated in Morita '467 col.

9, lines 20-32).

Re claim 10: Holmstead '905 discloses an information processing method for extending

the functions of a software for controlling a printer to print a print job generated from a

plurality of image data (i.e. a graphical user interface (114) sends commands to the

printer device to operate the control system (306) in a normal or schedule mode. This

controls the printer since the control system is commanded to download print job

elements specific to the mode use in order to print a print job that is generated from the

print job elements, which is analogous to a plurality of image data; see paragraphs

[0033] and [0060]-[0071]), comprising:

a step of creating a first list of identification information for a plurality of image

data designated to be printed (i.e. in the system, the control system is used to create

one or a series of print job elements that are used to identify information for print job

data that is to be acquired from a remote site, considered as a server device. This

information has reference data to the remote site that the information is located and

what part the element data is related to in the print job. This is considered as the list of

identification information for the image data since this information includes one or a

plurality of information used to identify the print job, or image data, to be printed and

these elements are a series of elements of a print job file to be fulfilled before a printing

operation. The first list is in regards to the print job ticket (500) generated and stored in

the input buffer (304). The job ticket stored in the input buffer represents identification

information of a plurality of image data that are designated to be printed and can be
acquired from a server device if needed; see figs. 3-5; paragraphs [0032]-[0044]);

   a step of storing in a cache memory image data, which has been printed (i.e. in
Holmstead '905 the system can be configured to have a components of the system in a
printer (100), or as a part of a host computer (206) in association with a printer (100).
The host computer (206) is considered as the information processing apparatus, which
has an image data memory (302). The local memory (302) has print job elements that
can be transmitted to the printer (100), or acquired from the remote site, in association
with the host computer (206). The elements downloaded from the remote site is stored
in the local memory, which is located in the printer, and the local memory has print job
information that has been designated for printing and acquired from the server device.
The information stored is also from previous jobs that have been printed on the printer
and the step (414) is used to store a print ready document on the printer with the
previously printed job; see figs. 2 and 3; paragraphs [0032]-[0044]);

   storing a second list of identification information for the printed image data stored
in said cache memory (i.e. on the remote site (202), the print job components,
considered as identification information for the image data, is stored. This same
information that is stored is also in the print instruction that is acquired by the control
system (306). The local memory is used to store some of the print job components that
have already been printed and these print job components are analogous to
identification information for a plurality of image data. The local memory (302) is used
to compare its components against the print job ticket temporarily stored in the input

buffer, which is where the first listing of the print job components is located. Also, the
local memory stores another collection of information that is comprised of elements in a
job that have already been printed and the collection of information is comprised of
information that identifies printed image data that is stored in the local memory. Since
the local memory can be comprised of EEPROM, RAM, ROM and a disk drive, multiple
storage units can be used for caching and storing the information that is used to identify
the cached data; see figs. 2, 3 and 5; paragraphs [0032]-[0044]);

      a step of comparing the first list and the second list (i.e. when the data is first
received by the printer, or the host computer that is associated with the printer, the data
is temporarily stored in the input buffer (304). The input buffer (304) holds the print job
ticket (500) and compares the print job ticket (500) components, with the components
stored in the local memory (302). This comparison is between the data stored in the
input buffer (304) and the data stored in the local memory (302) to see if the data
matches up to the print job ticket's (500) listed components; see figs. 2-5; paragraphs
[0032]-[0044]);

      an acquisition step of acquiring, from the server device, image data identified by
identification information which is not included in the second list but in the first list and
stores the acquired image data in the cache memory (i.e. the Holmstead reference
acquires image data identified by job element information from a server device through
a network card that facilitates network communication. Since the internal components
in the printer can be in a host computer coupled to a printer, the functionality of the
system using a host computer with the input buffer and local memory is an alternative

implementation of the method of printing image data. The input buffer inside the host

computer, considered as the first list, is used to include this job element information

while the local memory does not contain the job element information, which is

considered as the second list. Once the image data is acquired from the remote sites,

or server, the image data is combined into a complete job in the input buffer and printed.

The job elements that were added to job that were the missing elements are then stored

in the local memory, considered as the cache memory; see paragraphs [0029]-[0044]);

      a transmitting step of transmitting image data identified by the identification

information included in the first list from the cache memory to the printer after the

acquisition unit acquires the image data from the server device (i.e. the Examiner

believes that this feature is also performed by the Holmstead reference. Since the

printer device can be connected to a host computer, the transmission of data to the

printer is understood. When the user designates a print job to be printed, image data is

transferred to the input buffer from the local memory since the CPU in the searches the

local memory to see if all the print job elements are present in the local memory. Once

the CPU determines that all the print job elements are not present in the local memory,

the server sends the remaining elements to the computer and the user can send the

complete job to the printer connected to the host computer; see paragraphs [0029]-

[0031]);

      a step of deleting, from the cache memory, image data which is not designated to

be printed, after the image data has been transmitted from the cache memory to the

printer (i.e. in the system, the information stored in the different directories can be

overwritten or erased. At this point, since most of the image data in the input buffer is temporary, the image data can be deleted, or erased, at a time when the image data is not in the input buffer. The input buffer represents the first list that holds the identification information of print job components to be printed, and the image data located in the second list is represented by the local memory (302), which signifies a list that holds identification information that contains identification information for image data that has been previously printed. The only time an input buffer contains information is when a print job has been submitted to the printer. If the deletion of information occurs during a period where no print job information is in the input buffer or different print job information is in the input buffer than what is being deleted, the above feature is performed. As disclosed in Holmstead, the image data represented through print job elements can be erased after a certain period of time. When the system has seen that the job is a certain age, it may delete the job. This job can be a job that is not designated to be printed at the time the job reaches a certain age (i.e. 30 days old). The system has stored the image data in the local memory since the job has been printed in the past. With the job being transmitted from the host computer's local memory, considered as the cache memory, to the printer earlier than the thirty day job threshold and not being designated at the time of the thirty day time period, the feature of deleting information from the local memory is performed; see paragraph [0035]-[0038] and [0051]); and

an overwriting step of overwriting the second list after the image data has been transmitted from the cache memory to the printer (i.e. in the system, the list of print job

elements that are related to the print job in the local memory is updated with current

print elements, if the system detects that the print job elements in the print job is

missing. The missing print job elements are then acquired from the remote site,

considered as the server device, in the system. To be more specific, when comparing

the print job elements in the input buffer to the elements in the local memory, the image

data that is missing is acquired from a server device. The print job components missing

from the local memory, but present in the input buffer is an example of having image

data not included in the second list but in the first list. Once the scenario occurs where

the print job ticket (500) is present in the input buffer does not have all of its coinciding

elements in the local memory, then information is acquired from the server device and

later on, the local memory can be updated in step (414). Holmstead discloses the

feature of being able to overwrite information. This overwriting feature can be

performed after the host computer has transmitted information from the local memory to

the coupled printer; see figs. 2-5; paragraphs [0032]-[0044] and [0051]).

     However, Holmstead '905 fails to teach overwriting the second list with the first

list.

     However, this is well known in the art as evidenced by Morita '467. Morita '467

discloses overwriting the second list with the first list (i.e. However, the Morita reference,

like the Holmstead reference, contains a system that involves a host computer to

transfer printing information to a printing device (same field of endeavor). In the system,

if information on the file allocation table (26) on the RAM (17) is modified by having data

written or erased from the table, the update flag related to the updating of the RAM is

set to one. Next, the CPU (5) checks to see if the update flag is 1 in order to determine

if the hard disk (8) needs to be updated in conformity with the RAM. In this case, if

something is written on the RAM, then the same information is added on the hard disk

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updates, or writes, the information of the RAM (17) on the hard disk device (8) to ensure

that both device memories conform to each other; see figs. 5-10; col. 8, line 10 - col. 10,

line 65).

      Therefore, in view of Morita '467, it would have been obvious to one of ordinary

skill at the time the invention was made to have the feature of overwriting the second list

with the first list in order to have content relating to file information on one storage

device conform with the content on another storage device (as stated in Morita '467 col.

9, lines 20-32).

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

9.   Ichihara (USP 7023575) discloses an image data printing system and image data

printing method.

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CHAD DICKERSON whose telephone number is

(571)270-1351. The examiner can normally be reached on Mon. thru Thur. 9:00-6:30

Fri. 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Twyler Haskins can be reached on (571)-272-7406. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. D./
/Chad Dickerson/
Examiner, Art Unit 2625

/Twyler L. Haskins/
Supervisory Patent Examiner, Art Unit 2625